

# National Technical Systems Test Report for Environmental Testing of the ExpressVote XL & Express Touch

**Prepared For**

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A handwritten signature in black ink, appearing to read "L", written over a horizontal line.

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**Revision History**

Rev.	Description	Issue Date
0	TR-PR127740-00	01/12/2021

## Table of Contents

<b>1.0</b>	<b>Introduction .....</b>	<b>4</b>
<b>2.0</b>	<b>References .....</b>	<b>4</b>
<b>3.0</b>	<b>Product Selection and Description .....</b>	<b>4</b>
3.1	Security Classification .....	4
<b>4.0</b>	<b>General Test Requirements .....</b>	<b>4</b>
4.1	Test Equipment.....	4
4.2	Notice of Deviation .....	4
<b>5.0</b>	<b>Test Descriptions and Results.....</b>	<b>4</b>
5.1	Temperature/Power Variation .....	6
5.1.1	Test Result.....	6
5.1.2	Test Procedure.....	6
5.1.3	Test Datasheets.....	6
5.1.4	Test Photographs .....	7
5.1.5	Test Data .....	8
5.1.6	Test Equipment List .....	9

## List of Tables

Table 3.0-1: Product Identification - Equipment Under Test (EUT).....	4
Table 5.0-1: Summary of Test Information & Results .....	4
Table 5.0-2: EUT Details.....	5
Table 5.1-1: Temperature/Power Variation Test Equipment List.....	9



## 1.0 Introduction

This document presents the test procedures used and the results obtained during the performance of an Environmental test program. The test program was conducted to assess the ability of the specified Equipment Under Test (EUT) to successfully satisfy the requirements listed in Section 2.0.

## 2.0 References

The following references listed below form a part of this document to the extent specified herein.

- Pro V&V, Inc. Purchase Order(s) 2020-008, dated 10/22/2020
- National Technical Systems (NTS) Quote(s) , dated
- NTS Corporate Quality Policy Manual, Revision 9, dated 9/20/2018
- ISO/IEC 17025:2017(E) *General Requirements for the Competence of Testing and Calibration Laboratories*, dated 11/1/2017
- Test Specification: MIL-STD-810D

## 3.0 Product Selection and Description

Pro V&V, Inc. selected and provided the test sample(s) to be used as the Equipment Under Test. Details below:

**Table 3.0-1: Product Identification - Equipment Under Test (EUT)**

Item	Qty.	Name/Description	Part Number	Serial Number
1	1	ExpressVote XL	ExpressVote XL	See Table
2	1	Express Touch	Express Touch	See Table

## 3.1 Security Classification

Non-classified

## 4.0 General Test Requirements

### 4.1 Test Equipment

NTS-provided equipment is calibrated according to ISO/IEC 17025:2017(E) and calibration is traceable to the National Institute of Standards and Technology (NIST). Calibration records are maintained on file at NTS.

### 4.2 Notice of Deviation

In accordance with NTS' quality procedures, when the EUT is observed to exceed or display susceptibility, a Notice of Deviation (NOD) document is generated by the technician performing the test. This NOD documents the requirement, how the EUT deviated from the requirement, and allows room for resolution of the deviation.

This document is reviewed and approved by the NTS Program Manager or Engineer and the NTS Quality Assurance Representative, and then forwarded to the customer contact. Once mitigated (or passed over), the steps taken to correct the deviation (or simply instruction from the customer to continue testing) are recorded in the NOD and a copy of the NOD is integrated into the body of the report, in the appropriate location.

## 5.0 Test Descriptions and Results

**Table 5.0-1: Summary of Test Information & Results**

Section	Test	Specification	Test Facility	Test Date	Part #	Serial #	Test Result*
5.1	Temperature/ Power Variation	MIL-STD- 810D	Longmont	12/14/2020 - 12/17/2020	ExpressVote XL, Express Touch	See Table 5.0-2, See Table 5.0-2	N/A

\*The decision rule used to state compliance is in accordance with the test specification used for testing. Unless otherwise noted, testing was performed in accordance with the latest published version of test specification at time of test.

**Table 5.0-2: EUT Details**

Qty	Part Name/Number	Serial Number
1	ExpressVote XL	0119040359
1	ATI	UVC01200449
1	Headphones	HP-0004
1	ExpressVote XL	0119040262
1	ATI	UVC01200437
1	Headphones	HP-0006
1	ExpressVote XL	0119060608
1	ATI	UVC02190867
1	Headphones	HP-0005
1	Express Touch	0120340033
1	ATI	UVC08180789
1	Headphones	HP-0001
1	Express Touch	0120340040
1	ATI	UVC08180003
1	Headphones	HP-0002
1	Express Touch	0170330015
1	ATI	UVC01200424
1	Headphones	HP-0003



## 5.1 Temperature/Power Variation

### 5.1.1 Test Result

N/A

### 5.1.2 Test Procedure

Temperature/Power Variation 24-hr operation with power cycled accordingly over 85 hours with NTS support provided 24-hrs daily for first 85 hours per Method 502.2 and 501.2.

### 5.1.3 Test Datasheets

Start Date: 12/14/20		End Date: 12/17/20	MJO No: PR127740-00
Customer: Pro V&V/ES&S		Test Performed: Temperature Power Variation Test	Test By: KM
Part Name: ExpressVote XL, Express Touch		Serial No & Name: See UUT Details Sheet	Customer Witness: Yes
Page 1 of 1		Test Specification: MIL-STD_810D	Temp: +10c to +35c Voltage: 105vlts to 129vlts
Date	Time	Remarks	Initials
12/14/20	08:55	Set VAC to 117vlts & ramp to +10c	RSP
12/14/20	09:00	Start dwell at 117vlts & +10c for 4hrs	RSP
12/14/20	13:00	Lower VAC to 105vlts & dwell for 4hrs	GM
12/14/20	17:00	Raise VAC to 129vlts & dwell for 4hrs	KM
12/14/20	21:00	Lower VAC to 117vlts & Raise temperature to +35c & dwell for 4hrs	KM
12/15/20	01:00	Lower VAC to 105vlts & dwell for 4hrs	KM
12/15/20	05:00	Raise VAC to 129vlts & dwell for 4hrs	KM
12/15/20	09:00	Lower VAC to 117vlts & Lower temperature to +10c & dwell for 4hrs	GM
12/16/20	13:00	Lower VAC to 105vlts & dwell for 4hrs	GM
12/16/20	17:00	Raise VAC to 129vlts & dwell for 4hrs	KM
12/16/20	21:00	Lower VAC to 117vlts & Raise temperature to +35c & dwell for 4hrs	KM
12/16/20	01:00	Lower VAC to 105vlts & dwell for 4hrs	KM
12/16/20	05:00	Raise VAC to 129vlts & dwell for 4hrs	KM
12/16/20	09:00	Lower VAC to 117vlts & ramp to +23c ambient	GM
12/16/20	09:00	Temperature and power variation portion of test has completed	KM
12/16/20	09:00	Test will continue to run at +23c ambient for another 16hrs	KM
12/17/20	01:00	All Testing complete for a total of 64hrs	KM
		Note: All test pass or fail determinations decided by Pro V&V Inc.	

#### 5.1.4 Test Photographs

PR127740-00 - ExpressVote XL



PR127740-00 - ExpressVote XL



PR127740-00 - ExpressVote XL



PR127740-00 - Express Touch



PR127740-00 - Express Touch

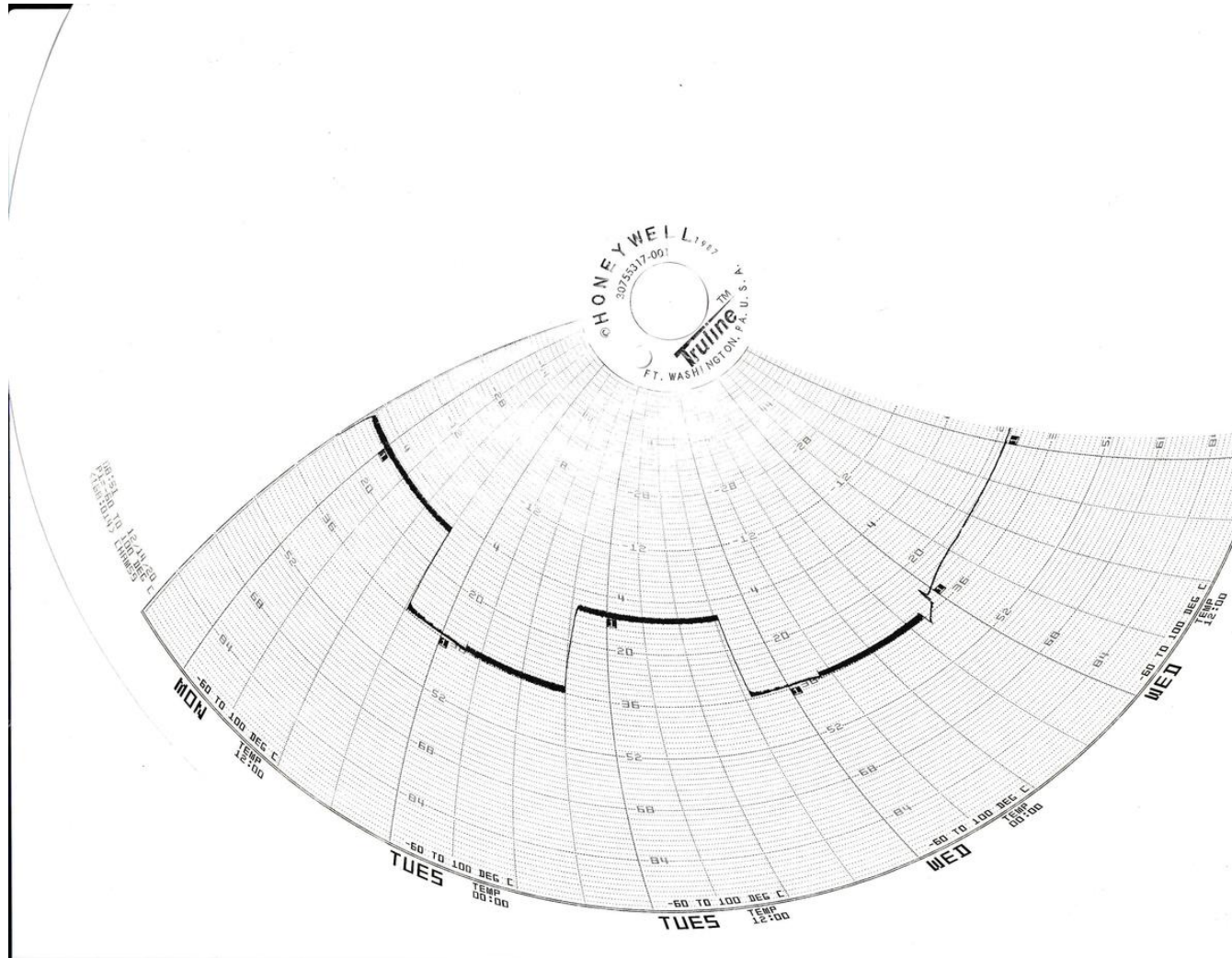


PR127740-00 - Express Touch





### 5.1.5 Test Data



Temp\_Pwr\_Var\_Graph\_Data





### 5.1.6 Test Equipment List

**Table 5.1-1: Temperature/Power Variation Test Equipment List**

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1733	N/A	N/A	N/A	Chamber 59	NCR	NCR
1653	Watlow	F4	N/A	Controller	10/05/20	10/05/21
1654	Honeywell	N/A	N/A	Chart Recorder	10/05/20	10/05/21

**Calibration Abbreviations**

CAL: Calibration

NCR: No Calibration Required



**End of Report**